

# ROBERTS

Sound for Generations

## R 827

### OPERATORS MANUAL



## PROFESSIONAL DIGITAL ALL-BAND WORLD RECEIVER

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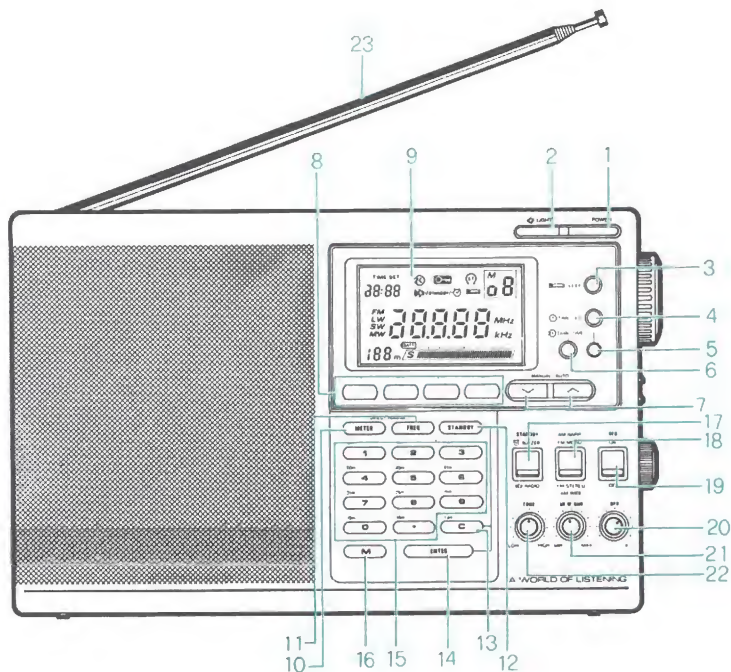
# FEATURES

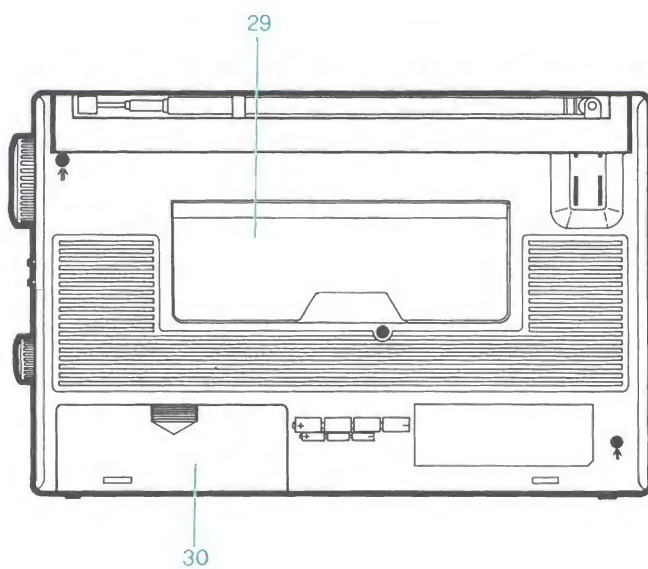
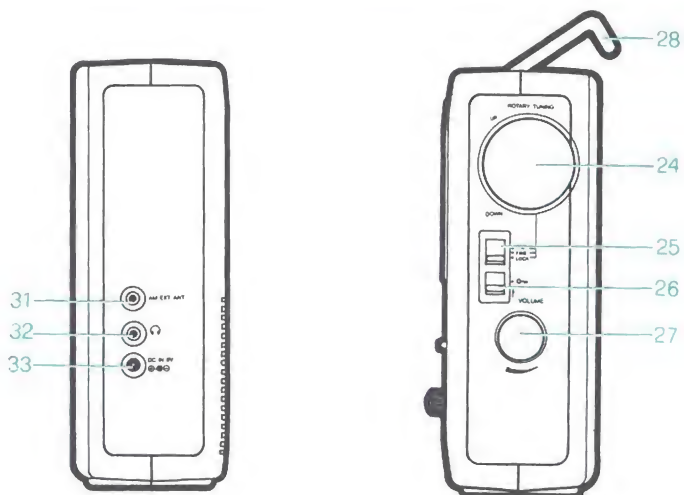
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- **Continuous Tuning** allows continuous reception of all stations and bands.
- **Fast response, Three Color LCD** indicates station frequency in large easy-to-read numbers, including dual time, memory location, signal strength and battery life.
- **Direct Access Keypad** permits instant tuning of any desired frequency from 87.5 to 108MHz on the FM band and from 150 to 29,999 KHz on the AM band.
- **Forty-Five Memory Pre-sets** offer instant access to your favorite stations on LW, MW, FM and SW.
- **AC/DC Power Supplies**
- **Special Tuning Controls** further improves radio reception.
- **Dual Time Setting** allows you to pre-set your local time and UTC World Time, or any two time zones with instant recall.
- **Scanning Circuit** permits you to check various frequencies on a certain bandwidth and lock on to it at random.
- **Cancel Button** allows you to instantly change incorrect information keyed into the microprocessor.
- **Band Select Buttons** offer instant selection of any desired frequency bandwidth on SW.
- **Tuning Speed Selector Switch** permits you to tune stations at either a fast or slow speed.
- **Sixty Minute Sleep Timer** will turn radio OFF at end of 60 minute elapsed.
- **Standby Mode** turns on the radio automatically at a pre-set time either by buzzer or radio program.
- **Stereo Headphone Jack** permits reception of FM multiplex stereo broadcasts.
- **Folding Stand** allows you to position the radio either vertically or at an angle while maintaining stability.
- **BFO Control** (Beat Frequency Oscillator) allows reception of SSB (Single Side Band) and CW (Continuous Wave Morse Code) transmissions.

# CONTROL LOCATIONS

1. Power On/Off Button
2. Display Light Button
3. Sleep Timer
4. Time Set
5. Dual Time Set
6. Dual Time Button
7. Manual Tuning/Auto Scan Button [Δ] [V]
8. Band Selectors
9. LCD Display
10. Meter Select Button
11. Frequency Select Button
12. Standby Button
13. Cancel Button
14. Enter Command Button
15. Numeric & Bandwidth Buttons
16. Memory Entry Button
17. Alarmed by Radio/Buzzer Selector
18. FM Stereo/Mono Mode Selector
19. AM Narrow/Wide Mode Selector
20. BFO On/Off Selector
21. BFO Pitch
22. RF Gain Control
23. Tone Control
24. Telescopic Antenna
25. Rotary Tuning Knob
26. Tuning Speed Control
27. Lock Switch
28. Volume Control
29. Carrying Handle
30. 9kHz/10kHz Step Switch and Battery Compartment
31. AM External Antenna Jack
32. Stereo Headphone Jack
33. DC Input Jack/6 Volts





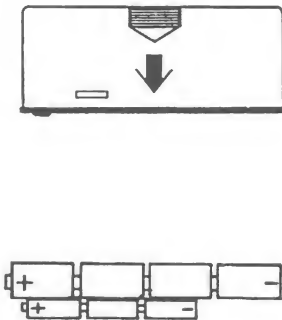
# CHOOSING A POWER SUPPLY

You can operate the receiver using:

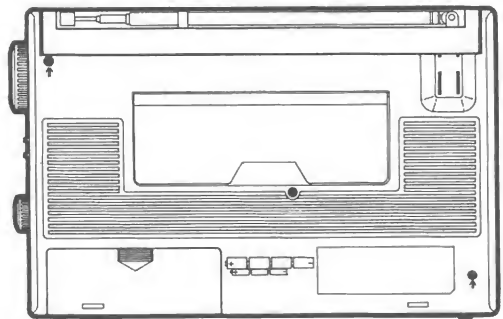
- 4 Alkaline "D" size Batteries
- Household AC [With optional AC Adaptor]
- 12 Volt DC Automobile Battery [With optional DC adaptor]

## USING BATTERIES

1. Press latch marked "OPEN" on battery compartment cover in the direction of the arrow and lift off cover.



2. Insert 3 "AA" batteries in the "Back-up" compartment and 4 "D" size batteries in the "Radio" compartment. Be sure to position them as illustrated on the back of the radio, and on top of the "lift-out" ribbons for easy removal.
3. Replace the battery compartment cover and press down until you hear it snap closed.



## NOTE

Whenever the radio is turned off, the battery indicator will flash for about five seconds to show battery condition.

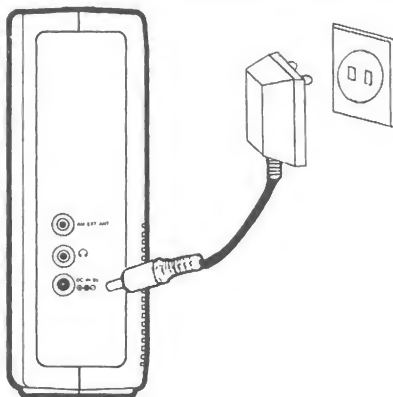
If the indicator falls below #2, the 4 MAIN "D" size batteries should be replaced.

When the "MAIN" batteries become exhausted, the micro-processor will automatically be powered by the "BACK-UP" batteries.

When the display on the micro-processor begins to fade, replace the 3 "AA" batteries in the "BACK-UP" circuit. During battery replacement make sure the Lock Switch (26) is in the locked position (O). This will prevent any memory presets from being lost during the battery replacement. Battery replacement should be completed within 2 minutes.

## MAINS SUPPLY

The receiver will operate from a mains supply of 240V~50Hz only using the AC adaptor supplied. Insert the small barrel shaped plug into the socket marked "DC IN 6V". No power will then be taken from the batteries while the lead is plugged into the receiver. Plug the other end of the adaptor into your mains supply socket. Disconnect the AC adaptor from the mains supply when not in use.



## IMPORTANT

The life of the "D" (R20) size batteries in the R827 will be approximately 40 hours at 4 hours per day. For economy it is recommended that the AC adaptor is used whenever possible with battery operation for standby or occasional use only.

### NOTE

When the DC cigarette lighter adaptor is connected to the radio, the internal battery supply is automatically disconnected.

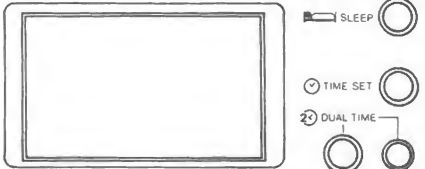
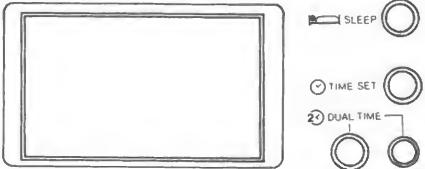
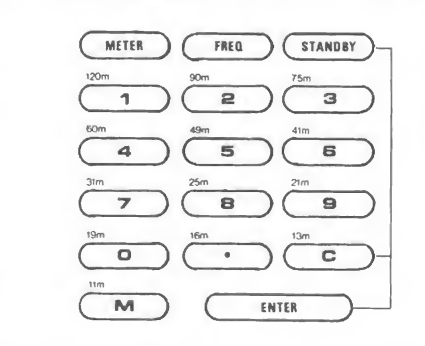
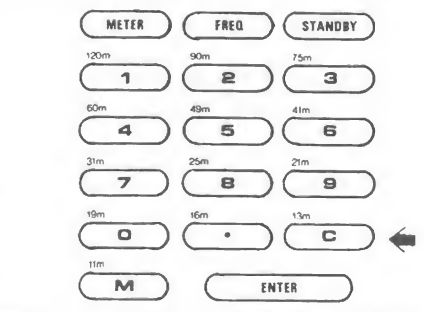
### CAUTION

Make sure that the barrel plug on the adaptor never comes in contact with any metal parts of the vehicle or boat! A short circuit can occur that may damage the adaptor or the electrical system.

# PRELIMINARY SETTINGS

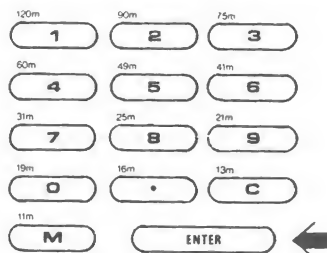
## SETTING THE CLOCK

The time is displayed in the 24 hour mode since most shortwave stations operate according to UTC. This is the standard that is used throughout the world.

<p>The clock will start when 3 "AA" size batteries are installed. The display shows "0:00"</p>	
<p>1. Press "TIME SET". "0:00" disappears &amp; for 12 seconds "TIME SET" flashes.</p>	
<p>2. While "FLASHING" set the correct time by pressing the numbered buttons. As you press the corresponding button the number shows up on the LCD display.</p>	
<p>3. If you press the wrong number, press the "C" [CANCEL] button which deletes one number at a time. Repeat step #2 again.</p> <p><b>NOTE</b> Time can only be adjusted when "TIME SET" is in flashing mode.</p>	


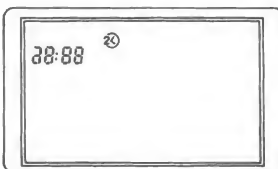
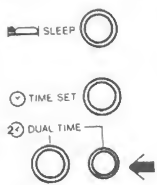
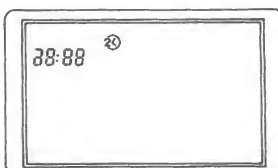
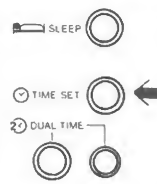
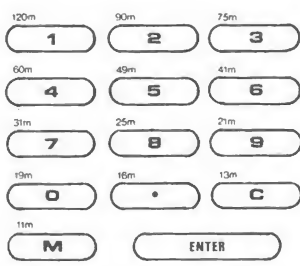
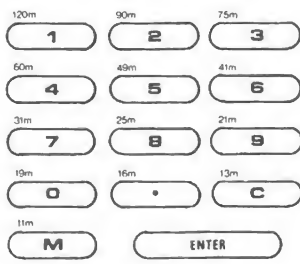


4. Now press button marked "ENTER".  
Display shows hours and minutes.

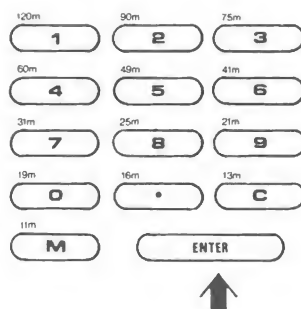


## SETTING DUAL TIME

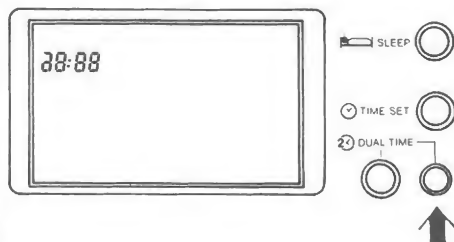
A second time zone can be programmed into this unit such as your home time if you are travelling, or UTC World Time for instant access to short-wave broadcasts or the local time where ever you may be.

<p>1. Press right side "DUAL TIME" button then the display will show the secondary TIME and  appears.</p>	 
<p>2. Press "TIME SET" button. Clock time will disappear &amp; "TIME SET" will flash for 12 seconds.</p>	 
<p>3. While "FLASHING" set the correct time by pressing the numbered buttons. As you press the corresponding button the number shows up on the LCD display.</p>	
<p>4. If you press the wrong number, press the "C" [CANCEL] button which deletes one number at a time. Repeat step #3 again.</p>	

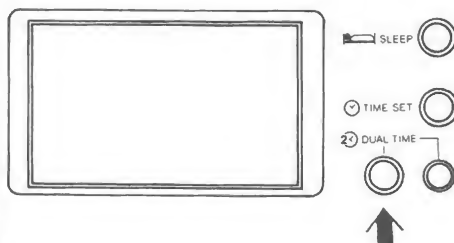
5. Now press button marked "ENTER",  
Display shows hours and minutes.



6. By pressing the right side "DUAL TIME" button now, the LCD display will once again show the clock time.



7. To verify "DUAL TIME", press the left side "DUAL TIME" button to display your "OTHER" time zone. When you release the button the clock will show your current local time.



## BAND SELECTION

There are four band selector buttons located just beneath the LCD display.



### BAND

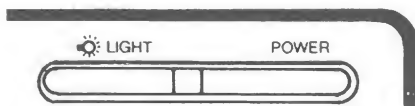
### FREQUENCY RANGE

### PROGRAM TYPE

FM	87.5~108 MHz
LW	150~519 kHz
MW	520~1710 kHz
SW	1.711~29.999 MHz

Standard FM
Longwave
Standard AM
SW/13 Sub-Bands

1. Turn radio on by pressing "POWER" button. Display will show last band and frequency selected.

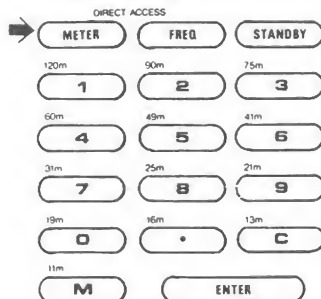


2. By pressing any one of the four band selector buttons the display shows the band selected and a random frequency within that band.



### NOTE

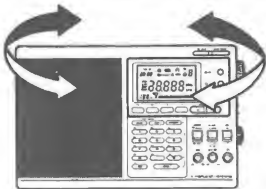
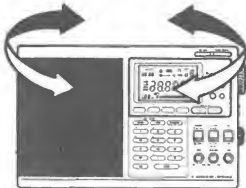
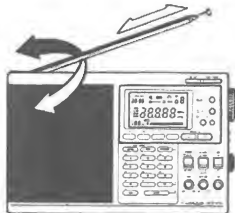
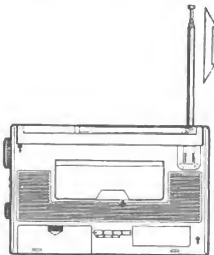
When you select SW you only have to press the button marked "METER", and then any one of the numbered buttons depending upon what band you want to listen to. The display will show the band you selected and a random frequency within that band.



# TUNING MODE

## ADJUSTING THE ANTENNA

Locate the band you want to listen to in the following chart and adjust the antenna as indicated

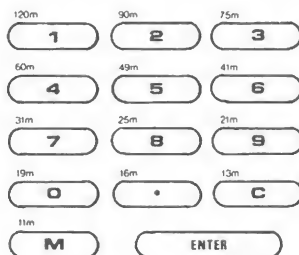
BAND	FREQUENCY RANGE	ANTENNA TYPES	ILLUSTRATION
MW	520~1710 kHz	INTERNAL Rotate radio for best reception	
LW	150— 519 kHz	INTERNAL Rotate radio for best reception	
FM	87.5— 108 MHz	TELESCOPIC Extend antenna all the way & rotate it for best reception	
SW	1.711~29.999 MHz	TELESCOPIC Extend antenna all the way for best reception & <b>do not</b> <b>rotate</b>	

You may select any frequency using four different tuning methods:

- **Direct Tuning**
- **Manual Tuning**
- **Scan Tuning**
- **Memory Tuning**

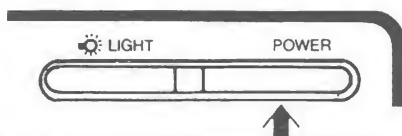
## DIRECT TUNING

You may "KEY IN" a specific band (120m, 49m, 16m) by pressing the appropriate button. The exact station is then selected by pressing the buttons corresponding to the station frequency.



**Example:** To tune 100.70 MHz on the FM band, follow this procedure:

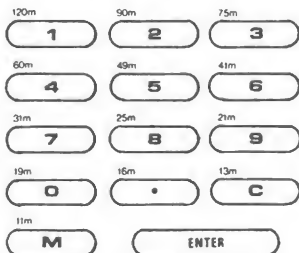
1. Press the **POWER** button to turn on the radio.



2. Press the button marked, **FREQ** ("Frequency")

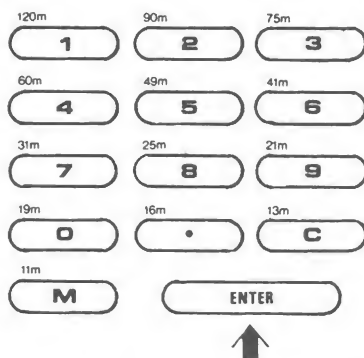


3. Press the corresponding buttons, marked [1], [0], [0], [•], [7], [0]. That exact frequency will now show up in the display.

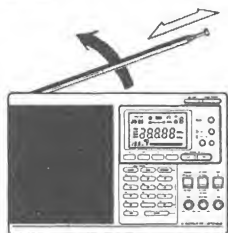


4. Press the button marked "ENTER" within twelve seconds. The frequency and band will now show up in the display. The SIGNAL STRENGTH will also show.

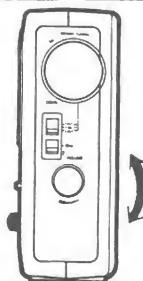
**NOTE:** Be sure to press the decimal point [•] in 100.70 MHz., otherwise the display will show "SW", [10.070 MHz] automatically.



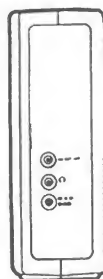
5. Extend the antenna all the way and rotate for best FM reception.



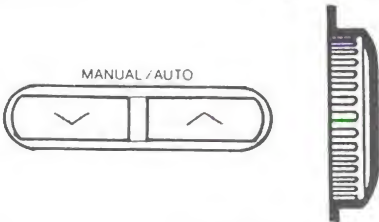


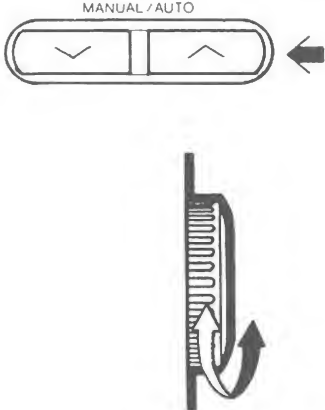
6. Adjust the VOLUME and TONE controls for the desired sound.



7. When selecting a stereo FM station, make sure the FM mode switch is in the STEREO position.



# MANUAL TUNING

<p>To select a station you do not know the frequency of, use the MANUAL TUNING [Δ] [v] buttons or the ROTARY TUNING control on the side of the radio.</p>	 <p>The diagram shows a rectangular button with a downward-pointing chevron (Δ) on the left and an upward-pointing chevron (v) on the right, labeled 'MANUAL / AUTO' above it. To the right of the button is a vertical rotary tuning knob with a scale of horizontal lines and a small window.</p>
<p>1. Press the POWER button to turn on radio.</p>	 <p>The diagram shows a horizontal button with a sun icon and the word 'LIGHT' on the left, and the word 'POWER' on the right.</p>
<p>2. Select a band.</p>	 <p>The diagram shows four rectangular buttons labeled 'FM', 'MW', 'LW', and 'SW' from left to right.</p>
<p>3. Press repeatedly the [Δ] or [v] buttons to reach a desired frequency. Press and hold the [Δ] or [v] buttons for at least a half second or more to change frequencies rapidly.</p> <p>OR Rotate the TUNING knob until the desired frequency or station is tuned in using the SIGNAL STRENGTH INDICATOR in the display for the best reception.</p>	 <p>The diagram shows the 'MANUAL / AUTO' button with a left-pointing arrow next to it. Below the button is a vertical rotary tuning knob with a scale of horizontal lines and a curved arrow indicating rotation.</p>



## NOTE

When you repeatedly press the [Δ] or [▽] buttons, the frequencies change in increments of:

FM : 50 kHz (or 100 kHz)

LW : 9 kHz

MW: 9 kHz or 10 kHz

SW: 5 kHz

Turning the ROTARY TUNING Knob with the TUNING SPEED CONTROL set on FAST will change each band as follows:

FM : 100 kHz

LW : 9 kHz

MW: 9 kHz/10 kHz

SW: 5 kHz

When set on SLOW, the frequencies change as follows:

FM : 50 kHz

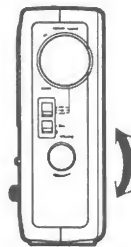
LW : 1 kHz

MW: 1 kHz

SW: 1 kHz

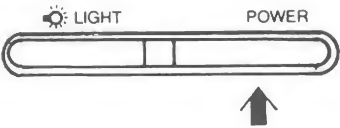

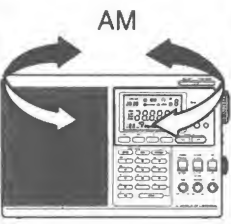

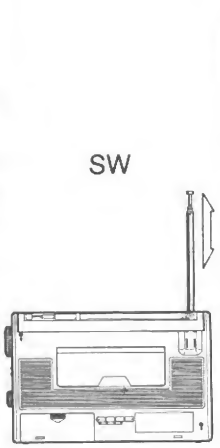
With the TUNING SPEED CONTROL set on LOCK, ROTARY TUNING will not function.

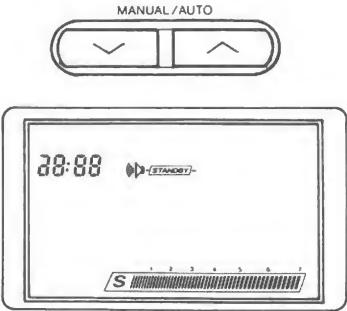
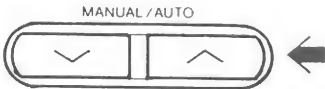
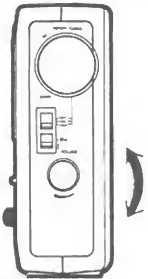
4. Adjust the VOLUME and TONE controls as you like.



## SCAN TUNING

Use scan tuning to quickly locate a station or to monitor several stations within a specific band.

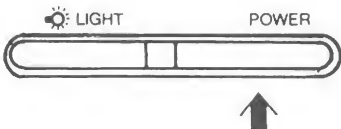
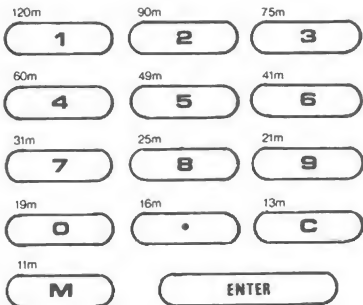
1. Turn on radio by pressing POWER button.	
2. Select a band.	
3. Adjust antenna or radio position depending on selected band.	<div data-bbox="591 774 820 997"></div> <div data-bbox="591 1029 820 1300"></div> <div data-bbox="843 774 1061 1220"></div>

<p>4. Press and hold the [Λ] or [v] buttons for at least a half second or more and the radio will scan all the frequencies in that band, and will stop automatically each time it lands on an active station. Signal strength is recorded on the SIGNAL STRENGTH INDICATOR.</p>	 <p>The diagram shows the top control panel of the radio. At the top, there is a 'MANUAL / AUTO' label above two buttons: a downward-pointing chevron (Λ) and an upward-pointing chevron (v). Below these buttons is a rectangular display screen. The screen shows the time '28:88' on the left, a speaker icon with the word 'STANDBY' on the right, and a signal strength indicator at the bottom. The indicator consists of a bar with a scale from 1 to 7, with an 'S' at the beginning.</p>
<p>5. Press and hold the [Λ] or [v] buttons again to resume scanning. When you reach the upper or lower limits of the band, the scanning starts all over again as long as the button is depressed once more.</p>	 <p>The diagram shows the same control panel as in the first step. A large black arrow points to the left, indicating the direction of the scan or the action to be performed.</p>
<p>6. Adjust the VOLUME and TONE controls as you like.</p>	 <p>The diagram shows the side of the radio. It features a large circular volume knob at the top, a small rectangular button in the middle, and a circular tone control knob at the bottom. A large black arrow points to the right, indicating the direction of adjustment.</p>

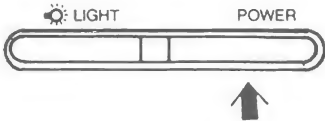

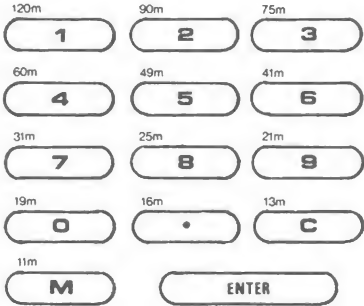
## MEMORY TUNING

You may store up to eighteen different frequencies on the SW band and up to nine different frequencies on each of the other bands for instant selection of your favorite stations.

### Storing a Frequency

1. Press POWER button to turn on radio.	
2. Turn to any frequency using any of the previously mentioned tuning methods.	
3. Press the button marked "M" for MEMORY it will start flashing in the display for 15 seconds during which time press any of the buttons marked 1 — 9 on the keyboard and your station will be stored in that memory position. For the SW band frequencies press 1 — 9 and then 01 — 09 for a total of 18 SW memory positions. The display will show the memory position the station is now stored in. <b>You may store your stations in any sequence you want. You do not have to start with #1.</b>	

# RECALLING A FREQUENCY

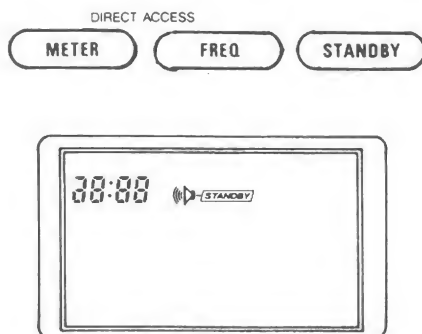
1. Press POWER button to turn on radio.	
2. Select a band in which a station is stored that you want to recall.	
3. Press any of the NUMBERED buttons for a desired station and the radio will instantly tune to it and display that frequency and the MEMORY position number. <b>If you want to change to another stored station, just press any other numbered button for access.</b>	

# CLOCK RADIO OPERATION

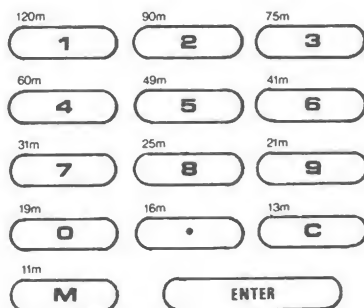
With this receiver you can fall asleep to your favorite station by pressing the SLEEP button, or wake you to the morning news, or an alarm buzzer. **Make the following settings with the POWER off!**

## Setting the Alarm

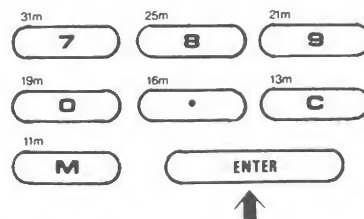
1. Press STANDBY button so display shows 0:00. STANDBY will flash for 15 seconds.


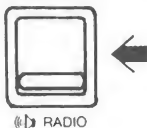


2. Press the numbered buttons to activate turn-on time using 24 hour time, in hours and minutes. For example, to set the radio to turn on at 1:30 PM each day, press the buttons until the display shows 13:30. **If the wrong number was keyed-in, delete it by pressing the CANCEL button marked "C". One time for each number. Then press the correct number for the time you want.**












3. When you reach your desired turn-on time, press ENTER, STANDBY stops flashing, your turn-on time is locked in. For 2 to 3 seconds, the clock returns to the current time automatically.



<p>4. To verify, press <b>STANDBY</b> button again. Press <b>STANDBY</b> once more and the clock returns to the current time.</p>	<p style="text-align: center;">DIRECT ACCESS</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">METER</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">FREQ</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">STANDBY</div> </div> <div style="text-align: center; margin-top: 10px;">  </div>
<p>5. You may select radio or buzzer alarm to wake you by setting <b>STANDBY: BUZZER/RADIO</b> selector switch.</p>	<p style="text-align: center;">STANDBY BUZZER</p> <div style="text-align: center;">  </div> <p style="text-align: center;">RADIO</p>
<p>6. To cancel the <b>ALARM</b> time, press <b>STANDBY</b> and "<b>C</b>" [CANCEL] button.</p>	<p style="text-align: center;">DIRECT ACCESS</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">METER</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">FREQ</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">STANDBY</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>120m</div> <div>90m</div> <div>75m</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">1</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">2</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">3</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>60m</div> <div>45m</div> <div>41m</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">4</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">5</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">6</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>31m</div> <div>25m</div> <div>21m</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">7</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">8</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">9</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>19m</div> <div>16m</div> <div>13m</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">0</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">•</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">C</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>11m</div> <div></div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">M</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">ENTER</div> </div>

## Setting the Sleep Timer

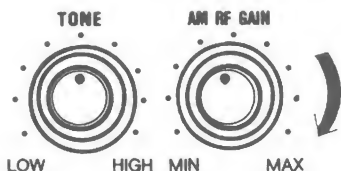
<p>1. Press <b>SLEEP</b> button. The icon  shows above the frequency read-out in the display. That's all there is to it.</p>	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 10px; margin-right: 10px;"> <p style="font-size: 1.2em;">28:88</p> <p style="font-size: 1.5em;">FM 288.88 kHz</p> </div> <div style="text-align: right;"> <p> SLEEP </p> <p> TIME SET </p> <p> DUAL TIME </p> </div> </div>
<p>2. To turn off the radio before it automatically turns itself off, press the <b>POWER</b> button.</p>	<div style="text-align: center; margin-bottom: 10px;"> <p> LIGHT</p> <div style="border: 1px solid black; border-radius: 10px; width: 300px; height: 20px; margin: 0 auto; position: relative;"> <div style="position: absolute; left: 50%; transform: translate(-50%, -50%); width: 100%; height: 100%;"></div> </div> </div> <div style="text-align: center;"> <p>POWER</p>  </div>

# SPECIAL TUNING TECHNIQUES AND CONTROLS

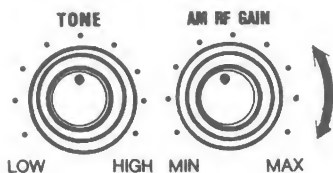
In addition to the standard tuning operations described previously, use the following controls for special operations.

## RF GAIN CONTROL

This control adjusts the receiver's sensitivity. For LW, MW, SW reception, rotate the control to the MAX position, this provides the maximum sensitivity. When you listen to the MW, standard AM band, or LW band through external antenna, rotate the control only as far as needed to obtain a good signal. If you turn the knob further you might hear a distorted signal. For weak stations, rotate the control to the MAX position.



If you encounter interference, adjust the control in both directions until you obtain the best compromise between your station and the interference.

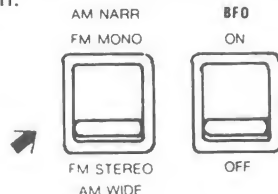


## AM NARROW/WIDE SELECTIVITY SWITCH

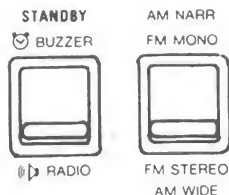
Some stations transmit their signal so that very little space exists between their airspace and the station next to them on the band. If, while tuning, you encounter interference, caused by the signal from an adjacent station, press the button for the band you are listening to and select the NARROW position. The interference is reduced or muted.



For full reception, leave the switch in the WIDE position.




If you plan to listen to Morse code, referred to as CW (continuous wave), set the BFO switch to ON position. If you encounter too much noise as you tune, set the AM NARROW/WIDE switch to NARROW position.

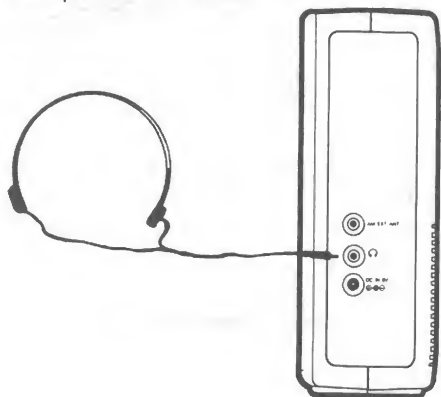




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

## HEADPHONE USE

While not a control, you may consider using HEADPHONES to obtain the best audio clarity when listening to SW. Since many SW stations broadcast only marginal signals, using HEADPHONES will enable you to distinguish between the signal and the noise usually encountered at night. Be sure that the HEADPHONES terminate in a 1/8 inch plug, which is inserted into the HEADPHONE jack located on the left side of the radio, marked with the symbol . When the HEADPHONES are plugged in, the speaker is muted.



Because the radio is capable of receiving FM multiplex stereo, Stereo HEADPHONES should be used. When listening to stereo FM, be sure that the FM: STEREO/MONO switch is set to the STEREO position.

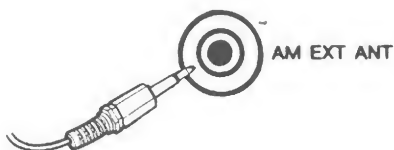
## LOCK SWITCH USE

Using the LOCK switch prevents unauthorized operation of the radio and will also prevent the station you are listening to from being changed. When the LOCK switch is moved to its up  position, the POWER button and TUNING controls are completely disabled. If the radio is on when the LOCK switch is moved to its up  position, you will not be able to turn it off. If the radio is off, with the LOCK switch in its up  position, you will not be able to turn it on. This will also prevent it from being turned on by accident, when packed in a attache case. To release the LOCK switch, simply move the switch down.



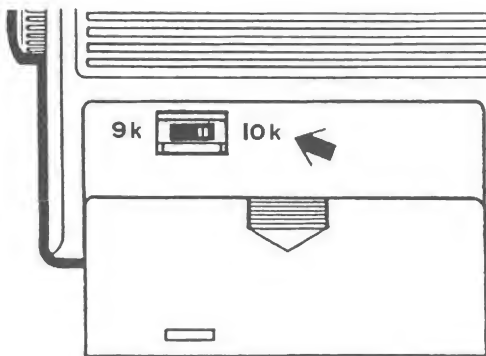
## EXTERNAL ANTENNA USE

To obtain optimum performance from this unit, especially when listening to SW/SSB/CW an external antenna should be used, if at all possible. The antenna is connected to the EXTERNAL ANTENNA ADAPTOR (optional extra) and then plugged into the EXTERNAL ANTENNA jack located on the left side of the radio.



## MW STEP SELECTOR SWITCH

Located in battery compartment of the unit, is a switch marked, 9K/10K. This switch selects the incremental frequency STEPS for the MW band, depending upon your geographic location. In the USA, 10K STEPS are used, so the switch should be set to its 10K position. In other parts of the world where they use 9K STEPS, move the switch to the 9K position.



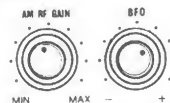
# SPECIAL SSB/CW RECEPTION TECHNIQUES

Many stations transmit unmodulated telegraph transmissions in the shortwave band. To receive these special Morse code characters, the radio uses a special circuit, a *beat-frequency oscillator*, to modify the transmitted signal so that you can hear it. This particular type of telegraph transmission is called *continuous wave* (CW) transmission.



## TO RECEIVE CW

Many stations transmit voice signals with a suppressed carrier in the *single side band* (SSB), part of the radio transmission spectrum that lies to the side of the primary frequency signal. Many amateurs who operate transmit below 10 MHz generally use the *lower side band* (LSB). Above 10 MHz, they usually use the *upper side band* (USB). Commercial utility stations generally use the USB. A carrier has to be added to make these signals audible.



1. Turn on the radio.

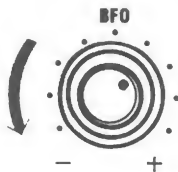
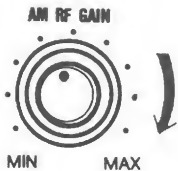

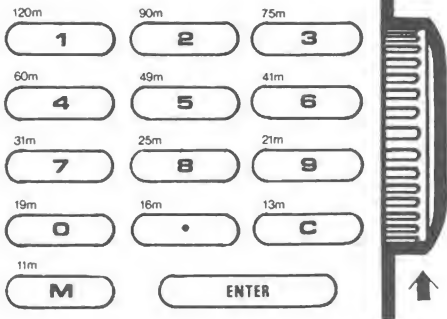


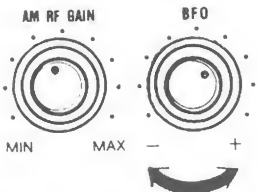
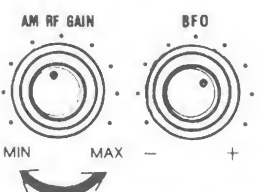
2. Extend the antenna fully straight up.





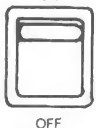
3. Set the BFO switch to ON.

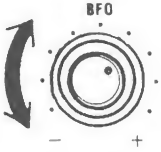
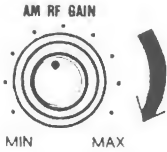

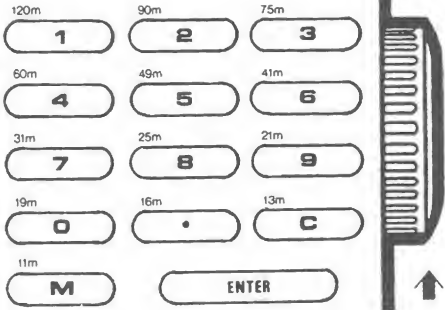


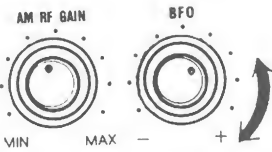
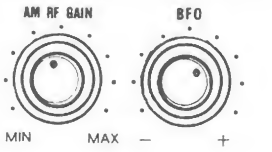
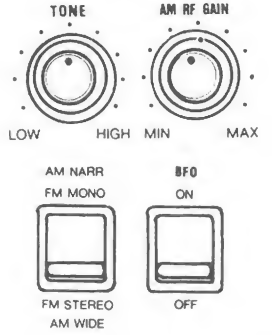
<p>4. Rotate the BFO PITCH control to the midpoint.</p>	
<p>5. Rotate the RF GAIN control to the MAX position.</p>	
<p>6. Press the SW band button to select the SW band.</p>	
<p>7. Tune in the CW station using the tuning knob, or enter the frequency using the direct access buttons.</p>	

8. Adjust the CW tone using the BFO PITCH control.	
9. Reduce strong signals by using the RF GAIN control. This also reduces interference and noise.	

## TO RECEIVE SSB VOICE

1. Turn on the radio.	
2. Extend the antenna fully, in a straight up position.	
3. Set the BFO switch to the ON position.	





<p>4. Rotate the BFO PITCH control to the midpoint.</p>	
<p>5. Rotate the RF GAIN control to the MAX position.</p>	
<p>6. Press the SW button to select the SW band.</p>	
<p>7. Tune in the SSB station using the tuning knob, or enter the frequency using the direct access buttons.</p>	

<p>8. Rotate the BFO PITCH control to adjust the signal quality.</p>	
<p>9. Rotate the RF GAIN control to dampen strong signals. This can improve signal clarity as well.</p>	
<p><b>Note:</b> Before choosing another band, set the RF GAIN control to MAX, and move the BFO switch to the OFF position.</p>	




## CARE AND MAINTENANCE

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This receiver is an example of superior design and craftsmanship. The following suggestions will help you care for the receiver so that you can enjoy it for years.

<p>Keep the product dry. If it does get wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.</p>	
<p>Use and store the product only in normal temperature environments. High temperatures can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.</p>	
<p>Handle the product gently and carefully. Dropping it can damage circuit boards and cases and can cause the product to work improperly.</p>	
<p>Keep the product away from dust and dirt, which can cause premature wear of parts.</p>	



<p>Wipe the product with a dampened cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean to product.</p>	
<p>Use only fresh batteries of the recommended size and type. Always remove old or weak batteries. They can leak chemicals that destroy electronic circuits.</p>	
<p>Modifying or tampering with the product's internal components can cause a malfunction and might invalidate the product's warranty.</p>	

# SPECIFICATIONS

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**Semi conductors:** 1 LSI, 11 IC,  
8 FET, 46 Transistors,  
49 Diodes.

**Circuit:**

FM : Heterodyne  
AM (LW, MW, SW) Double-conversion heterodyne

**Frequency range:**

FM: 87.5~108 MHz  
LW: 150~519 kHz  
MW: 520~1710 kHz  
SW: 1.711~29.999 MHz

in which divided into 13 shortwave bands

120m	2.300 – 2.495 MHz
90m	3.200 – 3.400 MHz
75m	3.900 – 4.000 MHz
60m	4.750 – 5.060 MHz
49m	5.950 – 6.200 MHz
41m	7.100 – 7.300 MHz
31m	9.500 – 9.900 MHz
25m	11.650 – 12.050 MHz
21m	13.600 – 13.800 MHz
19m	15.100 – 15.600 MHz
16m	17.550 – 17.900 MHz
13m	21.450 – 21.850 MHz
11m	25.670 – 26.100 MHz

**Antennas:**

LW/MW	built-in Ferrite bar Antenna
SW	Telescopic Antenna or External Antenna (not included)
FM	Telescopic Antenna

**Output:** Nominal 800 mW at 10% T.H.D.

**Jacks:**

1. DC jack for external power (6V)
2. Headphone jack – 3.5 $\phi$  for mini stereo headphones
3. AM Ext. Ant. jack.

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<b>Power sources:</b>	DC: 4 each "D" size batteries 3 each "AA" size batteries AC: 240V~50Hz using AC adaptor supplied
<b>Dimension:</b>	296(L) × 192(H) × 68(T)mm
<b>Weight:</b>	1600g without batteries
<b>Accessories:</b>	AC adaptor for use with 13A U.K. mains sockets only.

## Guarantee

This instrument is guaranteed for twelve months from the date of delivery to the original owner against failure due to faulty workmanship or component breakdown, subject to the procedure stated below. Should any component or part fail during this guarantee period it will be repaired or replaced free of charge

The guarantee does not cover:

1. Damage resulting from incorrect use.
2. Consequential damage.
3. Receivers with removed or defaced serial numbers.

N.B. Damaged or broken telescopic aerials and mains leads will not be replaced under guarantee.

### Procedure:

Any claim under this guarantee should be made through the dealer from whom the instrument was purchased it is likely that the Roberts dealer will be able to attend to any defect quickly and efficiently, but should it be necessary the dealer will return the instrument to the company's service department for attention. In the event that it is not possible to return the Instrument to the Roberts dealer from whom it was purchased, please contact Roberts Radio service department at the address below before taking further action.

*These statements do not affect the statutory rights of a consumer.*

### **ROBERTS RADIO TECHNICAL SERVICES DEPARTMENT,**

97 - 99 WORTON ROAD,  
ISLEWORTH,  
MIDDLESEX,  
TW7 6EG,

TECHNICAL HELPLINE 020 8758 0338 (MON - FRI)

IMPORTED BY :  
ROBERTS RADIO LIMITED  
ISSUED 1,



3816679D